

The opinion in support of the decision being entered today is *not* binding precedent of the Board.

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

Ex parte PAMELA BOURJA, BERND ETTE, MICHAEL JANKOWIAK,
ANDREAS KRAUSS, ARON-EMST MUSIOL AND GERHARD TIETZ

Appeal 2007-1702
Application 09/646,089
Technology Center 2800

Decided: July 19, 2007

Before JAMES D. THOMAS, HOWARD B. BLANKENSHIP, and ST. JOHN COURTENAY III, *Administrative Patent Judges*.

COURTENAY, *Administrative Patent Judge*.

DECISION ON APPEAL

This is a decision on appeal under 35 U.S.C. § 134(a) from the Examiner's rejection of claims 11-22. We have jurisdiction under 35 U.S.C. § 6(b).

We AFFIRM.

THE INVENTION

The disclosed invention generally relates to an electronic tripping device having multiple display elements. More particularly, the disclosed invention is directed to a tripping device for low-voltage circuit-breakers with adjusting elements and display elements for adjusting and displaying the tripping parameters. The invention improves upon similar tripping devices in the prior art, which relied primarily upon potentiometers, rotary coding switches, or DIP switches for adjusting the tripping parameters. The invention uses subassemblies which are less delicate, simpler, cheaper, and more easily readable and operable for the user than prior art mechanical switches (Specification 1-3).

Independent claim 19 is illustrative:

19. A device for a low-voltage circuit breaker, comprising:

an electronic tripping device having an operating face;

an adjusting circuit incorporated in the tripping device, the adjusting circuit configured to derive an internal signal for the tripping device; and

adjusting elements and display elements for tripping parameters, the adjusting elements and the display elements being incorporated in the tripping device, the adjusting elements and the display elements cooperating with the adjusting circuit and arranged at the operating face of the tripping device, the tripping parameters including tripping current and corresponding time delay in case of overload;

wherein the adjusting elements are key switches and the display elements are LCD elements to display adjustments selected via the key switches, and

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wherein the LCD elements include a different respective LCD element for each of the tripping parameters to be adjusted.

THE REFERENCES

Howell	US 4,429,340	Jan. 31, 1984
Durivage, III	US 5,038,246	Aug. 6, 1991
Yalla	US 5,224,011	Jun. 29, 1993
Dvorak	US 5,825,643	Oct. 20, 1998

Applicant's Admitted Prior Art (AAPA), Specification (5, ll. 31-35).

THE REJECTIONS

1. Claims 11, 13, 14, and 19-22 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over the teachings of Yalla in view of Howell.
2. Claim 12 stands rejected under 35 U.S.C. § 103(a) as being unpatentable over the teachings of Yalla in view of Howell, and further in view of Dvorak.
3. Claims 15-17 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over the teachings of Yalla in view of Howell, and further in view of Durivage.
4. Claim 18 stands rejected under 35 U.S.C. § 103(a) as being unpatentable over the teachings of Yalla in view of Howell, and further in view of AAPA.

Rather than repeat the arguments of Appellants or the Examiner, we make reference to the Briefs and the Answer for the respective details thereof.

Claims 11, 13, 14, and 19-22

We consider first the Examiner’s rejection of claims 11, 13, 14, and 19-22 as being unpatentable over the teachings of Yalla in view of Howell. Since Appellants’ arguments with respect to this rejection have treated these claims as a single group which stand or fall together, we will select independent claim 19 as the representative claim for this rejection because we find it is the broadest independent claim before us. *See* 37 C.F.R. § 41.37(c)(1)(vii)(2004).

Elements

Appellants argue there is no teaching or suggestion in Yalla or Howell “*to display a plurality of tripping parameters in an easily readable and permanent manner*” (Br. 7, emphasis in original). In response, we note that displaying parameters “in an easily readable and permanent manner” is not recited in either of independent claims 19 and 21. Nevertheless, we find that both Yalla (col. 5, ll. 28-32) and Howell (col. 6, ll. 49-51) disclose using liquid crystal displays (LCD).¹ Appellants have acknowledged in the Brief that liquid crystal displays provide display of parameters in an easily readable and permanent manner (Br. 5, ¶ 4).

With respect to displaying a plurality of tripping parameters, we find Yalla sequentially displays a plurality of tripping parameters within a single liquid crystal display (LCD) 41, whereby knob 76 is used to scroll through the parameters (col. 5, ll. 32-43, Fig. 1). In particular, we note that Yalla explicitly uses the word “tripping” at column 5, lines 38 and 42. We find

¹ Howell teaches the use of both LED displays (col. 2, ll. 1 and 20) and LCD displays (col. 6, ll. 49-51).

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Howell teaches displaying multiple parameters simultaneously using a first LED bargraph (display) for indicating electrical current and a second accessory LED bargraph (display) for indicating a time delay interval (col. 1, ll. 57 through col. 2, l. 21). Thus, the Examiner relies upon Howell for its teaching of multiple display elements associated with a circuit breaker (Answer 4). We find the weight of the evidence supports the Examiner's position that the combination of Yalla and Howell teaches and/or suggests displaying a plurality of tripping parameters, with each parameter being displayed in a different LCD element, as required by the language of the claim.

Motivation

Appellants argue "there is no suggestion as to the desirability of the combination of the Yalla and Howell patents to arrive at the subject matter of the claimed invention." (Br. 6, ¶ 3).

We note the U.S. Supreme Court recently stated:

When a work is available in one field, design incentives and other market forces can prompt variations of it, either in the same field or in another. If a person of ordinary skill in the art can implement a predictable variation, and would see the benefit of doing so, § 103 likely bars its patentability. Moreover, if a technique has been used to improve one device, and a person of ordinary skill in the art would recognize that it would improve similar devices in the same way, using the technique is obvious unless its actual application is beyond that person's skill. *KSR Int'l Co. v. Teleflex Inc.*, 127 S. Ct. 1727, 1731, 82 USPQ2d 1385, 1389 (2007).

This reasoning is applicable here. We note that Yalla and Howell are both directed to monitoring and controlling circuit breakers. As pointed out by the Examiner, Yalla discloses a single display element rather than multiple display elements (Answer 4, ¶ 1; *see also* Yalla, Fig. 1, liquid crystal display (LCD) 41, col. 5, l. 32). We note the Examiner merely relies upon Howell for its teaching of multiple display elements associated with a circuit breaker (Answer 4). In particular, Howell teaches displaying multiple parameters simultaneously using a first LED bargraph display for indicating electrical current and a second accessory LED bargraph display for indicating a time delay interval (*see* Howell col. 1, ll. 57 through col. 2, l. 21). Therefore, we conclude that modifying Yalla with the multiple displays of Howell would have been a predictable variation of prior-art elements according to their established functions. We find common sense dictates that the modification proffered by the Examiner would have been well within the level of knowledge possessed by a person having ordinary skill in the art.²

In the Reply Brief, Appellants further argue that the Examiner has impermissibly formulated the rejection by relying upon “hindsight, reconstruction and speculation” (Reply Br. 4).

² *See KSR*, 127 S. Ct. at 1732, 82 USPQ2d at 1390 (“When there is a design need or market pressure to solve a problem and there are a finite number of identified, predictable solutions, a person of ordinary skill in the art has good reason to pursue the known options within his or her technical grasp. If this leads to the anticipated success, it is likely the product not of innovation but of ordinary skill and common sense.”).

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In response, we note that the U.S. Supreme Court recently reaffirmed that “[a] factfinder should be aware, of course, of the distortion caused by hindsight bias and must be cautious of argument reliant upon *ex post* reasoning.” *KSR*, 127 S. Ct. at 1742, 82 USPQ2d at 1397. *See also Graham v. John Deere Co.*, 383 U.S. 1, 36, 148 USPQ 459, 474 (1966). Nevertheless, in *KSR* the Supreme Court also qualified the issue of hindsight by stating that “[r]igid preventative rules that deny factfinders recourse to common sense, however, are neither necessary under our case law nor consistent with it.” *KSR*, 127 S. Ct. at 1742-43, 82 USPQ2d at 1397.

Here, we conclude that a person of ordinary skill in the art having common sense at the time of the invention would have reasonably been motivated to add multiple displays to Yalla in the manner taught by Howell. We note that both Yalla and Howell are directed to displaying information about the settings and operating conditions of circuit breakers. Howell discloses using additional displays to show additional information, as desired (col. 2, ll. 18-21; col. 6, ll. 55-63). In particular, Howell discloses that “other display types and configurations will occur to those knowledgeable in the art” (col. 6, ll. 61-63). Thus, we find that common sense dictates that any parameter of interest (such as tripping parameters) can be selected for display, as desired. We find the weight of the evidence and recourse to common sense support the Examiner’s position. Therefore, we do not agree with Appellants’ contention that the Examiner has impermissibly engaged in “hindsight, reconstruction and speculation” (*see Reply Br. 4*).

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Appellants further argue that the Office has failed to make any findings regarding what a person having ordinary skill in the art would have been at the time the claimed subject matter of the present invention was made (Reply Br. 4, ¶ 3).

In response, we note that the level of ordinary skill in the art may be gleaned from the prior art. *See Union Carbide Corp. v. American Can Co.*, 724 F.2d 1567, 1573, 220 USPQ 584, 589 (Fed. Cir. 1984) (“We hold only that an invention may be held to have been either obvious (or nonobvious) without a specific finding of a particular level of skill or the reception of expert testimony on the level of skill where, as here, the prior art itself reflects an appropriate level and a need for such expert testimony has not been shown.”). *See also Custom Accessories, Inc. v. Jeffrey-Allan Indus., Inc.*, 807 F.2d 955, 962, 1 USPQ2d 1196, 1201 (Fed. Cir. 1986) (The person of ordinary skill in the art is a hypothetical person who is presumed to know the relevant prior art.).

Here, we find the prior art itself reflects the level of skill in the art. In particular, we note that Yalla explicitly discloses the use of “microprocessor-based protective relays *that include the tripping functions required to protect the interconnection ...*” (col. 1, ll. 53-55, emphasis added). Yalla further teaches displaying a plurality of tripping parameters within a single liquid crystal display (LCD) 41 (col. 5, ll. 32-43, Fig. 1). After carefully reviewing all of the evidence before us, we find that an artisan having knowledge of Yalla and Howell (and possessing a corresponding level of skill) would have been aware of the enhanced information content associated with multiple displays (as taught by Howell) as opposed to a single display (as taught by

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Yalla). Howell clearly teaches the objective of providing multiple displays for a static-trip circuit breaker (col. 1, ll. 31-52). As discussed *supra*, Howell explicitly discloses that “other display types and configurations will occur to those knowledgeable in the art” (col. 6, ll. 61-63). Thus, we find that a person having ordinary skill in the art would have been aware of the teachings of Yalla and Howell, and it would have been well within the level of knowledge possessed by that person to combine the references to arrive at the claimed subject matter in the manner suggested by the Examiner.

Therefore, for at least the aforementioned reasons, we conclude the Examiner has met the burden of presenting a *prima facie* case of obviousness. Accordingly, we will sustain the Examiner’s rejection of representative claim 19 as being unpatentable over Yalla in view of Howell.

Claims 11, 13, 14, and 20-22

Pursuant to 37 C.F.R. § 41.37(c)(1)(vii), we have decided the appeal with respect to the remaining claims in this group on the basis of the selected claim alone. Therefore, we will sustain the Examiner’s rejection of claims 11, 13, 14, and 20-22 as being unpatentable over Yalla in view of Howell for the same reasons discussed *supra* with respect to representative claim 19

Claim 12

We consider next the Examiner’s rejection of dependent claim 12 as being unpatentable over the teachings of Yalla in view of Howell and Dvorak.

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Appellants argue that Dvorak does not overcome the deficiencies of Yalla and Howell (Br. 7).

We see no deficiencies with respect to Yalla and Howell, as discussed *supra*. Therefore, we will sustain the Examiner's rejection of dependent claim 12 as being unpatentable over Yalla in view of Howell and Dvorak for the same reasons discussed *supra* with respect to independent claim 19.

Claims 15 and 16

We consider next the Examiner's rejection of dependent claims 15 and 16 as being unpatentable over the teachings of Yalla in view of Howell and Durviage.

Appellants argue that Durviage does not overcome the deficiencies of Yalla and Howell. Appellants further argue there is no disclosure in Durviage of a plurality of display elements for each of the tripping parameters (Br. 8).

Regarding the argued plurality of display elements, we note the Examiner relies on Yalla and Howell for this limitation, not Durviage. Durviage must be read, not in isolation, but for what it fairly teaches in combination with the prior art as a whole. *See In re Merck & Co., Inc.*, 800 F.2d 1091, 1097, 231 USPQ 375, 380 (Fed. Cir. 1986) (one cannot show nonobviousness by attacking references individually where the rejections are based on combinations of references.).

Here, we agree with the Examiner that the combination of Yalla and Howell teaches and/or suggests a plurality of display elements, with each tripping parameter being displayed in a different LCD element, as discussed

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supra with respect to claim 19 (*see also* Answer 6, 19). Therefore, we will sustain the Examiner’s rejection of claims 15 and 16 as being unpatentable over Yalla in view of Howell and Durviage for the same reasons discussed *supra* with respect to independent claim 19.

Claim 17

We consider next the Examiner’s rejection of dependent claim 17 as being unpatentable over the teachings of Yalla in view of Howell and Durviage.

Appellants again argue that Durviage does not overcome the deficiencies of Yalla and Howell (Br. 8).

We see no deficiencies with respect to Yalla and Howell, as discussed *supra*. Therefore, we will sustain the Examiner’s rejection of claim 17 as being unpatentable over Yalla in view of Howell and Durviage for the same reasons discussed *supra* with respect to claims 19, 13, and 15, from which claim 17 depends.

Claim 18

Lastly, we consider the Examiner’s rejection of dependent claim 18 as being unpatentable over the teachings of Yalla in view of Howell and AAPA.

Appellants argue that AAPA (i.e., the Kent Company LCD elements, Specification 5, ll. 31-35) does not overcome the deficiencies of Yalla and Howell (Br. 8-9).

We see no deficiencies with respect to Yalla and Howell, as discussed *supra*. We note that claim 18 recites “wherein the LCD elements

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permanently present information to be displayed without supply of energy, subsequent to feeding the information to the LCD elements” (claim 18). We have found *supra* that both Yalla (col. 5, ll. 28-32) and Howell (col. 6, ll. 49-51) disclose using LCD displays. In particular, we note again that Appellants have acknowledged in the Brief that liquid crystal displays provide display of parameters in an easily readable and permanent manner (Br. 5, ¶ 4). Therefore, we find the weight of the evidence supports the Examiner’s position. Accordingly, we will sustain the Examiner’s rejection of dependent claim 18 as being unpatentable over Yalla in view of Howell and AAPA.

DECISION

We sustain the Examiner’s rejection of all claims on appeal. Therefore, the decision of the Examiner rejecting claims 11-22 is affirmed.

No time period for taking any subsequent action in connection with this appeal may be extended under 37 C.F.R. § 1.136(a)(1)(iv).

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AFFIRMED

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